

while in one area a steep bluff supports an unusual occurrence of the Piedmont/Coastal Plain Heath Bluff community. Quality of the communities varies, but the portions in better condition are among the best examples in the state. The Coastal Plain Bottomland Hardwood community tends to be more mature in the northern portions of the natural area, with larger trees reaching 2.5 feet in diameter. Typical canopy dominants include laurel oak (*Quercus laurifolia*), overcup oak (*Q. lyrata*), water oak (*Q. nigra*), and sweet gum (*Liquidambar styraciflua*). Closer to areas with longer periods of standing water, overcup oak tends to be dominant with baldcypress (*Taxodium distichum*), water hickory (*Carya aquatica*), and laurel oak. Mayberry (*Vaccinium elliotii*) and cane (*Arundinaria tecta*) are often patch dominants in the shrub layer, which can be dense.

The periodically flooded river bank and its relatively narrow summit support the Coastal Plain Levee Forest Blackwater Subtype. Although locally disturbed by logging, much of this community is in very good condition with mature to old-growth forest, the larger trees reaching 2.5 feet in diameter. Laurel oak, overcup oak, sweet gum, and river birch (*Betula nigra*) are the most frequent canopy trees, with swamp red maple (*Acer rubrum* var. *trilobum*) and baldcypress also important. Joining young canopy species in the understory are ironwood (*Carpinus caroliniana*) and American holly (*Ilex opaca*). Mayberry and cane are common in the shrub layer, with dwarf palmetto (*Sabal minor*) locally prominent.

There is a highly unusual community occurrence in this natural area, along a north-facing bluff above the river floodplain, called the Piedmont/Coastal Plain Heath Bluff. The bluff is nearly vertical and densely covered with shrubs, particularly mountain laurel (*Kalmia latifolia*) and horsesugar (*Symplocos tinctoria*). Other shrubs include sparkleberry (*Vaccinium arboreum*), mayberry, coastal sweet-pepperbush (*Clethra alnifolia*), and blue huckleberry (*Gaylussacia frondosa*). White oak (*Quercus alba*), loblolly pine (*Pinus taeda*), and sweet gum form an open canopy. This community occurrence is similar to those found on bluffs along the Little River in Cumberland and Harnett counties.

**MANAGEMENT AND PROTECTION:** No active management is needed for the floodplain forests. Habitat throughout the natural area is privately owned, but a few tracts are protected by conservation easements, with N.C. Coastal Land Trust among the easement holders. The remainder is unprotected and vulnerable to logging.

**NATURAL COMMUNITIES:** Coastal Plain Bottomland Hardwoods Blackwater Subtype, Coastal Plain Levee Forest Blackwater Subtype\*, Piedmont/Coastal Plain Heath Bluff\*.

**RARE PLANTS:** a liverwort (*Cheilolejeunea myriantha*).

**RARE ANIMALS:** vertebrates - American alligator (*Alligator mississippiensis*), Rafinesque's big-eared bat (*Corynorhinus rafinesquii macrotis*), river frog (*Rana heckscheri*). Invertebrates - American sand burrowing mayfly (*Dolania americana*), Cape Fear spike (*Elliptio marsupiobesa*)\*.

\*only in Sampson County at this site